

Applicant: Kim et al.
Application No.: 10/071,917

REMARKS

Claims 1-4, 13 and 14 are currently pending in this application. The Examiner has rejected claims 1 and 13 under 35 U.S.C. §102. The Examiner has rejected Claims 2-4, and 14 under 35 U.S.C. §103.

The Applicants have amended claims 1 and 13 to more particularly and distinctly claim the subject matter regarded as the invention. All claim amendments are fully supported in the specification and/or drawings and no new matter is being introduced by the amendments.

Double Patenting – Obviousness-type

The Examiner rejected claims 1-4 and 13-14 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of various copending Applications.

The Applicants are willing to submit a terminal disclaimer to overcome the rejections over the claims of the Applications the Examiner cited, if the Examiner believes the Application is otherwise allowable.

35 U.S.C. §102(e)

Claim 1

The Examiner rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by Ylitalo et al. (U.S. Reference No. 6,788,661).

The Ylitalo reference discloses an adaptive beam-time coding method and apparatus where a diversity encoder (10) receives an input signal (S_{IN}) which contains a first symbol (S_1) and a second symbol (S_2). The diversity encoder performs an operation on both symbols and outputs S_1 and $-S_2^*$ onto a first channel (CH_1) into a complex multiplier (12) and S_2 and S_1^* onto a second channel (CH_2) into a complex multiplier (14), which then impart a different spread spectrum code. In the Ylitalo reference, all input signals first go through a diversity encoder where an operation is performed prior to forwarding to the complex multipliers.

There is no disclosure, teaching or suggestion in the Ylitalo reference that a first channelization code that spreads a data field is *uniquely* associated with a first antenna and a second channelization code that spreads a data field is *uniquely* associated with a second antenna, as is recited in the Applicants' invention as claimed in amended independent claim 1.

Accordingly, the Applicants' invention as claimed in amended independent claim 1 is patentable over the Ylitalo reference.

Claim 13

The Examiner rejected claim 13 under 35 U.S.C. §102(e) as being anticipated by Dabak et al. (U.S. Reference No. 6,594,473).

The Dabak reference discloses spreading data on more than one antenna using the *same* walsh code. Referring to Figure 4 of Dabak, Walsh code one (W_1) is used to spread the data transmitted on both antenna one *and* antenna two. Walsh code two (W_2) is used to spread the data transmitted on both antenna three *and* antenna four. There is no disclosure, teaching, or suggestion that any different channelization code is used on the symbols in the Dabak reference. Furthermore, there is no disclosure, teaching, or suggestion in the Dabak reference of any channelization code being uniquely associated with a particular antenna.

Accordingly, the Applicants' invention as claimed in amended independent claim 13 is patentable over the Dabak reference.

35 U.S.C. §103(a)

Claims 2-4

The Examiner rejected claims 2-4 as being unpatentable over Ylitalo in view of Akiba et al. (U.S. Ref. No. 6,721,300).

The Akiba reference discloses an encoding method and diversity transmitter. As with the Ylitalo reference, there is no disclosure, teaching or suggestion in the Akiba reference that a first channelization code that spreads a data field is *uniquely* associated with a first antenna and a second channelization code that spreads a data field is *uniquely* associated with a second antenna, as is recited in the Applicants' invention as claimed in amended independent claim 1.

Accordingly, the Akiba reference fails to cure the deficiencies of the Ylitalo reference, and the Applicants' invention as claimed in amended independent claim 1 is patentable over the Ylitalo and Akiba references, whether taken alone or in combination with one another.

Claims 2-4 depend, either directly or indirectly from the Applicants' patentable independent claim 1 and are therefore patentable for at least the same reasons as patentable amended independent claim 1.

Furthermore, claim 2 recites "scrambling said first and second spread data fields by a scrambling code associated with said UE" which is not disclosed, taught or suggested by the Ylitalo or Akiba references taken alone or in combination with one another. Therefore, claim 2 is patentable for this reason as well as its dependence from patentable amended independent claim 1.

Claim 14

The Examiner rejected claim 14 under 35 U.S.C. §103(a) as being unpatentable over Dabak in view of Akiba.

As previously, discussed, the Applicants' invention as claimed in amended independent claim 13 is patentable over the Dabak reference. Furthermore, the Akiba reference fails to cure the deficiencies of the present invention. Accordingly, the Applicants' invention as claimed in amended independent claim 13 is patentable over the Dabak and Akiba references, whether taken alone or in combination with one another.

Since claim 14 depends from the Applicants' patentable independent claim 13, it is therefore patentable for at least the same reasons as patentable amended independent claim 13.

Furthermore, claim 14 recites "scrambling said first and second spread data fields by a scrambling code associated with said transmitter" which is not disclosed, taught or suggested by the Dabak or Akiba references taken alone or in combination with one another. Therefore, claim 14 is patentable for this reason as well as its dependence from patentable amended independent claim 13.

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Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the Applicants' undersigned attorney by telephone at the Examiner's convenience.

In view of the foregoing remarks and amendments, the Applicants respectfully submit that the present application, including claims 1-4 and 13-14, is in condition for allowance and a notice to that effect is respectfully solicited.

Respectfully submitted,

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